



TRANS TECH CONSULTANTS

*Environmental Compliance Services
Engineers • Geologists • Architects
License # 697833 (A-Haz)*

April 18, 2006
Job No. 3046.01

Mr. John Scarbrough
104 Franklin Street
Fortuna, California 95540

Subject: **1st Quarter 2006 Monitoring Report**
Ferndale Motors, 638 Main Street, Ferndale, California
LOP No. 12343

Dear Mr. Scarbrough:

This report presents the results of the 1st Quarter 2006 groundwater monitoring and sampling event conducted at the subject site. The site is approximately located as shown on the attached Site Location Map, Plate 1. The work was performed in accordance with directives from the Humboldt County Department of Health and Human Services - Division of Environmental Health.

Monitoring Well Sampling

On March 30, 2006, groundwater samples were collected from monitoring wells (wells) MW-1 through MW-6 and piezometer PZ-1. The approximate well locations and general site features are shown on the attached Site Plan/Groundwater Elevation Contour Map, Plate 2. Prior to sampling, static water levels were measured and each well was checked for the presence of free product using an oil/water interface probe. No free product was reported during this sampling event. To produce representative samples prior to sampling, the wells were then purged of approximately three well casing volumes using a submersible pump. In addition, indicator parameters including the temperature, pH, and conductivity were measured during purging and recorded on the attached Groundwater Field Sampling Forms, Appendix A. The water levels in MW-2 through MW-6, and PZ-1 were allowed to recover to near static levels prior to sampling. MW-1 was sampled after the water level had recovered to approximately 70% of the static level. Groundwater samples were collected using a separate disposable bailer for each well and transferred to the appropriate containers supplied by the laboratory. The groundwater samples were labeled, stored under refrigerated conditions and then transported under Chain-of-Custody documentation to Kiff Analytical LLC (Kiff) of Davis, California for chemical analysis. Purged groundwater and rinsate water was stored onsite in 55-gallon DOT drums, pending disposal.

Water Level Measurements

Monitoring well top-of-casing (TOC) elevations, depths to groundwater, the calculated water level elevations, and the calculated groundwater flow direction and gradient data for March 30, 2006 are presented in Table 1. Elevations are expressed in feet relative to mean sea level (msl), depths are expressed in feet and gradients are expressed in feet per foot. Historical groundwater flow direction and gradient data are attached in Appendix B.

Table 1: Groundwater Flow Direction and Gradient Data

Sample Date	Monitoring Well ID	Top-of-Casing Elevations (feet - msl)	Water Level Depth (feet)	Calculated Water Level Elevation (feet - msl)	Groundwater Flow Direction/Gradient (i)
03/30/06	MW-1	47.69	6.54	41.15	Northerly / Southerly i = 0.03 / 0.07
	MW-2	49.16	6.80	42.36	
	MW-3	47.90	8.13	39.77	
	MW-4	46.79	7.57	39.22	
	MW-5	48.14	5.73	42.41	
	MW-6	48.97	5.46	43.51	
	PZ-1	48.86	8.15	40.31	

Groundwater elevation contours based on MW-1 through MW-6, and PZ-1 for the March 30, 2006 monitoring event are shown on Plate 2. It appears that groundwater generally flows southerly towards MW-3 from Main Street and northwesterly towards MW-3 from the subject site. This flow pattern creates a trough - like feature in the vicinity of MW-3 and MW-4.

Laboratory Analytical Results

Groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (g) using EPA Test Method 8260. The volatile organic compounds; benzene, toluene, ethyl benzene and xylene (BTEX), the additional oxygenated fuel additives including methyl tert-butyl ether (MtBE), and lead scavengers including 1,2 dichloroethane (EDC) were analyzed using EPA Test Method 8260B. Analysis for TPH as diesel was inadvertently omitted from the sampling suite and will be analyzed for during the next sampling event. The laboratory analytical results for the March 30, 2006 event are presented on page 3, Table 2. The results for TPH-g, BTEX, and MtBE are expressed in micrograms per liter ($\mu\text{g/L}$). The laboratory report and Chain-of-Custody documentation are attached in Appendix C. Historical groundwater sample results are presented in Appendix D.



Table 2: Groundwater Analytical Results

Sample Date	Monitoring Well ID	TPH-g	TPH-d	B	T	E	X	MtBE
		µg/L						
03/30/06	MW-1	4,400	<1500 +	27	7.2	18	7.8	<0.50
	MW-2	<50	<50	<0.50	<0.50	<0.50	<0.50	0.60
	MW-3	2,200	<1,000 +	280	3.0	10	4.8	0.85**
	MW-4	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	MW-5	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	MW-6	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	PZ-1	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50

< = Less than the indicates laboratory test method detection limit.
 + = The method reporting limit for TPH as diesel is increased due to interference from gasoline-range hydrocarbons.
 ** = Additional 8260 analytes detected (see laboratory report).

Discussion

TPH-g was detected in groundwater samples collected from MW-1 and MW-3 at concentrations of 4,400 µg/L and 2,200 µg/L, respectively. BTEX constituents were also detected in groundwater samples collected from wells MW-1 and MW-3 with benzene occurring at a maximum concentration of 280 µg/L in MW-3. MtBE was detected in the groundwater sample collected from MW-2 and MW-3 at concentrations of 0.60 µg/L and 0.85, respectively. In addition, di-isopropyl ether (DIPE), tert-butanol (TBA), and 1,2 dichloroethane (EDC) were detected in the samples collected from MW-3 at concentrations of 1.5 µg/L, 10 µg/L, and 6.9 µg/L respectively. Samples collected from wells MW-4, MW-5, MW-6, and PZ-1 were below laboratory test method detection limits for all the constituents analyzed.

The recent analytical results are generally consistent with historical concentrations of petroleum hydrocarbons and indicate that onsite impact remains greatest in the vicinity of MW-1 and MW-3. Time Vs. Concentration Graphs that depict contaminant concentrations over time have been prepared for wells MW-1 and MW-3 and are attached in Appendix E. In general, the Time versus Concentration Graphs for wells MW-1 and MW-3 depict a slight increase in TPH as gasoline and benzene concentrations since 1998.

The next semi-annual monitoring and sampling event is scheduled for September 2006.

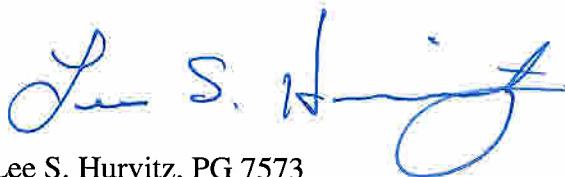


We appreciate the opportunity to be of service to you and trust this provides the information you require at this time. If you have any questions, do not hesitate to contact us at (707) 575-8622 or www.transtechconsultants.com.

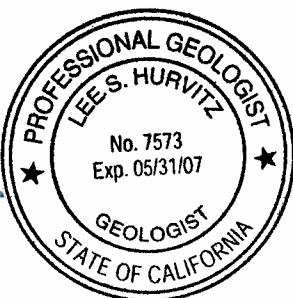
Sincerely,
TRANS TECH CONSULTANTS



Brian R. Hasik
Staff Geologist



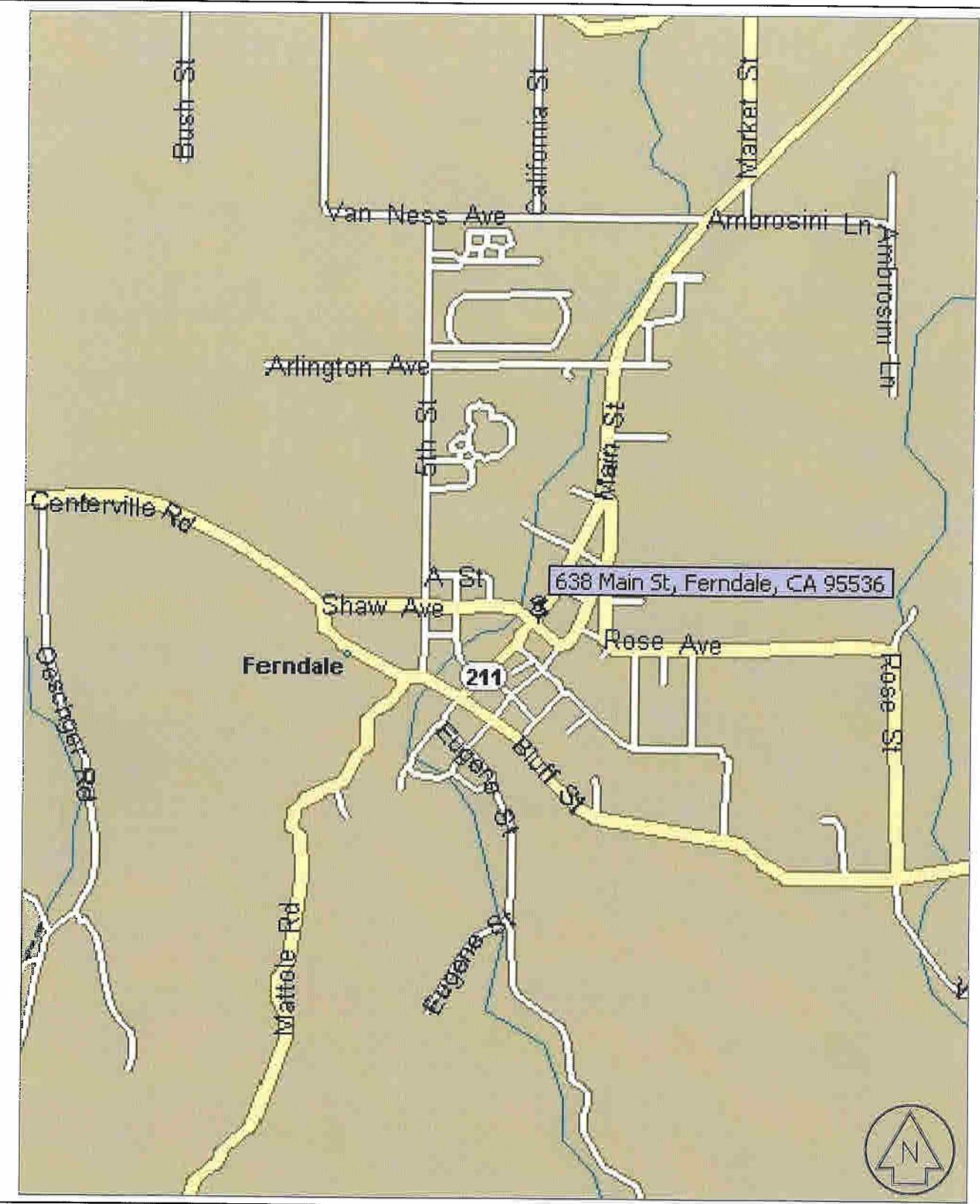
Lee S. Hurvitz, PG 7573
Professional Geologist



QMR_3046_01_20060418

Attachments: Plate 1, Site Location Map
Plate 2, Site Plan / Groundwater Elevation Contour Map
Appendix A, Groundwater Field Sampling Forms
Appendix B, Historical Groundwater Flow Direction and Gradient Data
Appendix C, Kiff Analytical LLC Report dated April 10, 2006
Appendix D, Historical Groundwater Analytical Results
Appendix E, Time vs. Concentration Graphs, MW-1 and MW-3
Distribution List

Cc: Mr. Mark Verhey, Humboldt County Department of Health and Human Services - Division of Environmental Health
Ms. Kasey Ashley, North Coast Regional Water Quality Control Board



TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-575-8622 FAX: 707-837-7334

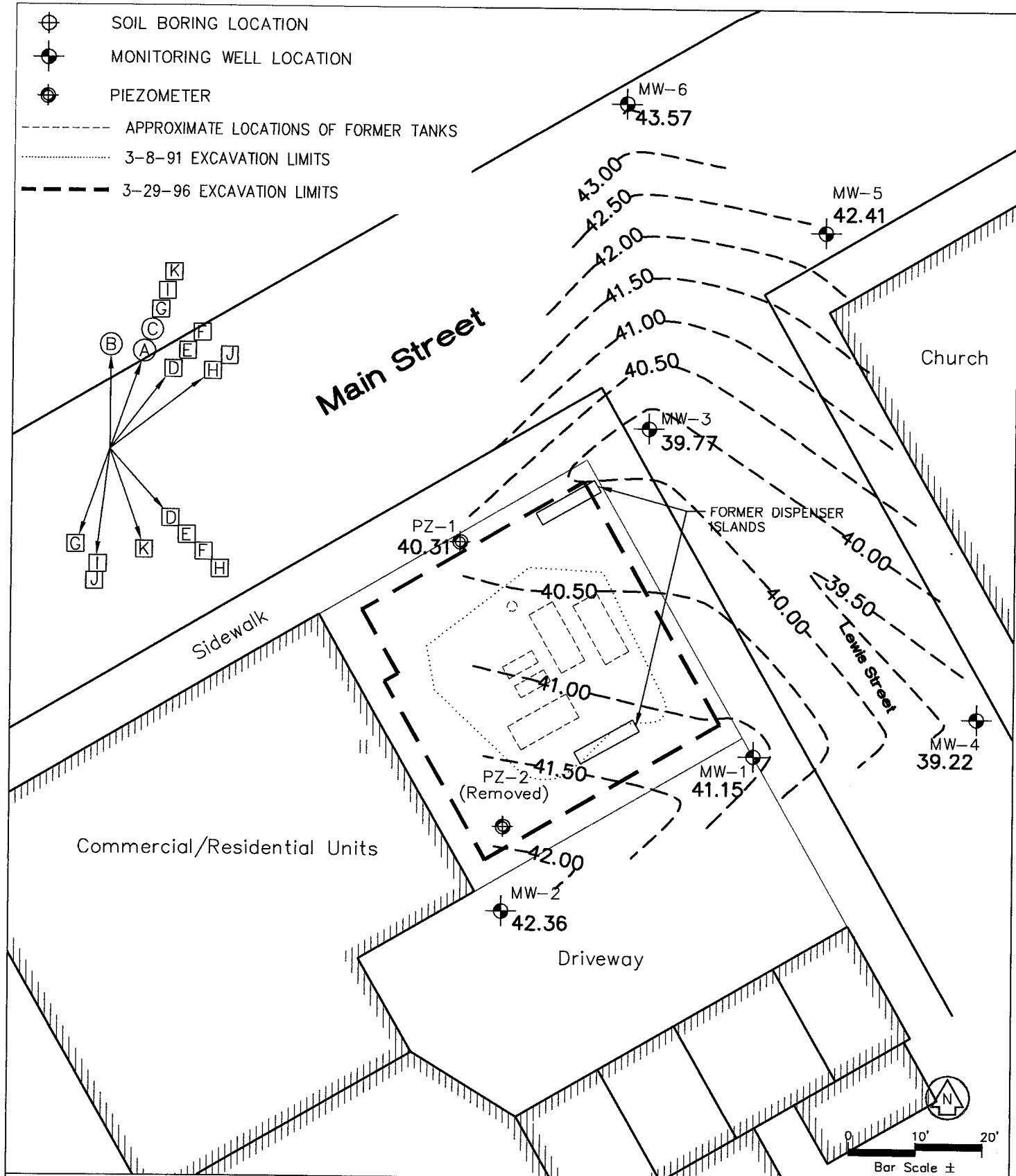
SITE LOCATION MAP

FERNDALE MOTORS
638 MAIN STREET
FERNDALE, CALIFORNIA

PLATE:

1

DRAWN BY: PSC	DWG NAME: 3046.01 SLM	APPR. BY: LSH	JOB NUMBER: 3046.01	W.O. NUMBER: A-246	REVISIONS:	DATE: 9/22/03
------------------	--------------------------	------------------	------------------------	-----------------------	------------	------------------



TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-575-8622 FAX: 707-837-7334

SITE PLAN / GROUND WATER ELEVATION CONTOUR MAP FOR 3/30/06

FERNDALE MOTORS
638 MAIN STREET
FERNDALE, CALIFORNIA

PLATE:

2

SHEET 1 OF 2

DRAWN BY: DWG NAME: APPR. BY: JOB NUMBER: W.O. NUMBER: REVISIONS: DATE:
JLP 3046.01 GWFP BRH 3046.01 A-926 4/6/06

GROUNDWATER FLOW LEGEND

 MW-1 Monitoring Well Location
[XX.XX] Groundwater Elevation

NOTE: Ground water elevations are in feet above mean sea level (National Geodetic Vertical Datum, 1929).

..... Excavation Limits, 3/8/91
— — Excavation limits, 3/29/96

Estimated Groundwater Flow Direction

Estimated Groundwater Variable Flow Direction



TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-575-8622 FAX: 707-837-7334

SITE PLAN / GROUND WATER ELEVATION CONTOUR MAP FOR 3/30/06

FERNDALE MOTORS
638 MAIN STREET
FERNDALE, CALIFORNIA

PLATE:

2

SHEET 2 OF 2

APPENDIX A

Appendix A contains the following tables:

Table A-1: Summary of the 2008-09 Budget Deficit by Sector

Table A-2: Summary of the 2008-09 Budget Deficit by Sector

Table A-3: Summary of the 2008-09 Budget Deficit by Sector

Table A-4: Summary of the 2008-09 Budget Deficit by Sector

Table A-5: Summary of the 2008-09 Budget Deficit by Sector

Table A-6: Summary of the 2008-09 Budget Deficit by Sector

Table A-7: Summary of the 2008-09 Budget Deficit by Sector

Table A-8: Summary of the 2008-09 Budget Deficit by Sector

Table A-9: Summary of the 2008-09 Budget Deficit by Sector

Table A-10: Summary of the 2008-09 Budget Deficit by Sector

Table A-11: Summary of the 2008-09 Budget Deficit by Sector

Table A-12: Summary of the 2008-09 Budget Deficit by Sector

Table A-13: Summary of the 2008-09 Budget Deficit by Sector

Table A-14: Summary of the 2008-09 Budget Deficit by Sector

Table A-15: Summary of the 2008-09 Budget Deficit by Sector

Table A-16: Summary of the 2008-09 Budget Deficit by Sector

Table A-17: Summary of the 2008-09 Budget Deficit by Sector

Table A-18: Summary of the 2008-09 Budget Deficit by Sector

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 3046.01 Ferndale Motors		Well Number: MW-1
Project Location: 638 Main Street Ferndale, California	Casing Diameter: 2"	Well Depth from TOC (BP): 15.00 Well Depth from TOC (AP):
Date: March 30, 2006	Top of Screen:	Initial Well Depth:
Sampled by (print and sign): Brian Hasik <i>Brian Hasik</i>	Product Thickness in inches: 0	
	Water Level from TOC: 6.66	Time: 9:08
Notes: HC odor	Water Level pre-purge: 6.54	Time: 10:07
	Well Type: <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	Well Mat: PVC

WEATHER

Wind: Yes / No	Clouds: Yes / No	Sun: Yes / No	Precipitation in last 5 days: Yes / No
Rain: Yes / No	Fog: Yes / No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

(TD - WL) X (Dia. Inches)² X 0.0408 = 1.35 gallons in one well volume
4.06 gallons in 3 well volumes (Approx. 0.6 gal/ft) 5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / μS	Turbidity H/M/L
10:09	1	6.35	14.5	-93		619.5	L
10:10	2	6.34	14.3	-102		587.4	L
10:11	3	6.32	14.6	-106		627.8	L
10:11	4	6.33	14.9	-109		648.0	L
10:12	5	6.31	15.2	-98		629.8	L

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 8.90 Time: 11:00

Appearance of Sample:

Bailer: Disposable Pump: 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 5 Soil: 0 Other: 0

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 3046.01 Ferndale Motors		Well Number: MW-2
Project Location: 638 Main Street Ferndale, California	Casing Diameter: 2"	Well Depth from TOC (BP): 14.80 Well Depth from TOC (AP):
Date: March 30, 2006	Top of Screen:	Initial Well Depth:
Sampled by (print and sign): Brian Hasik <i>Brian Hasik</i>	Product Thickness in inches: 8	
	Water Level from TOC: 6.80	Time: 9:05
	Water Level pre-purge: 6.80	Time: 9:41
	Well Type: <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	Well EL (TOC):
Well Mat: PVC		

WEATHER

Wind: Yes <input type="checkbox"/> No	Clouds: Yes <input type="checkbox"/> No	Sun: Yes <input type="checkbox"/> No	Precipitation in last 5 days: Yes <input type="checkbox"/> No
Rain: Yes <input type="checkbox"/> No	Fog: Yes <input type="checkbox"/> No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

$$(\frac{\text{TD}}{\text{WL}} - \frac{\text{WL}}{\text{WL}}) \times (\frac{\text{Diameter}}{2})^2 \times 0.0408 = \frac{1.28}{1.28} \text{ gallons in one well volume}$$

3.84 gallons in 3 well volumes (Approx. 0.6 gal/ft) _____ total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
9:43	1	5.79	13.8	111		336.8	1
9:44	2	5.80	13.5	115		351.0	1
9:44	3	5.73	13.8	116		386.1	1
9:45	4	5.70	14.1	116		337.5	1
9:45	5	5.73	14.3	114		331.0	1

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: *6.90* Time: 10:50

Appearance of Sample:

Bailer: Disposable Pump: 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: *2* Soil: *0* Other: *0*

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 3046.01 Ferndale Motors		Well Number: MW-3
Project Location: 638 Main Street Ferndale, California	Casing Diameter: 2"	Well Depth from TOC (BP): 15.00 Well Depth from TOC (AP):
Date: March 30, 2006	Top of Screen:	Initial Well Depth:
Sampled by (print and sign): Brian Hasik <i>Brian Hasik</i>	Product Thickness in inches:	
	Water Level from TOC: 8.72	Time: 9:06
Notes: Dry @ 3.5g AC 000R	Water Level pre-purge: 8.13	Time: 9:48
	Well Type: <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	
	Well EL (TOC):	Well Mat: PVC

WEATHER

Wind: Yes / No	Clouds: Yes / No	Sun: Yes / No	Precipitation in last 5 days: Yes / No
Rain: Yes / No	Fog: Yes / No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

$$(\frac{\text{TD}}{\text{WL}}) \times (\frac{\text{WL}}{2}) \times 0.0408 = (\frac{3.80}{3.30}) \times \frac{3.30}{2} \times 0.0408 = 1.10 \text{ gallons in one well volume}$$

3.80 gallons in 3 well volumes (Approx. 0.6 gal/ft) 3.5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
9:51	1	6.22	14.8	-85		959.5	L
9:51	2	6.25	15.0	-104		969.1	L
9:52	3	6.27	15.4	-99		966.0	L
9:52	3.5	6.30	15.6	-106		975.1	L

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 9.30 Time: 10:55

Appearance of Sample: yellowish

Bailer: Disposable Pump: 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 2 Soil: 8 Other: 8

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 3046.01 Ferndale Motors		Well Number: MW-4
Project Location: 638 Main Street Ferndale, California	Casing Diameter: 2"	Well Depth from TOC (BP): 15.00 Well Depth from TOC (AP):
Date: March 30, 2006	Top of Screen:	Initial Well Depth:
Sampled by (print and sign): Brian Hasik <i>Brian Hasik</i>	Product Thickness in inches: 8	
	Water Level from TOC: 7.56	Time: 9:00
	Water Level pre-purge: 7.57	Time: 9:15
Notes:	Well Type: <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	Well EL (TOC): Well Mat: PVC

WEATHER

Wind: Yes / No	Clouds: Yes / No	Sun: Yes / No	Precipitation in last 5 days: Yes / No
Rain: Yes / No	Fog: Yes / No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

(TD) X (WL)² X 0.0408 = 1.19 gallons in one well volume
Dia. Inches

3.57 gallons in 3 well volumes (Approx. 0.6 gal/ft) _____ total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
9:18	1	6.25	13.8	26		198.2	L
9:19	2	6.09	13.6	33		186.8	L
9:19	3	6.00	13.9	39		201.0	L
7:20	5	5.98	14.3	36		311.8	I

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 7.91 Time: 10:30

Appearance of Sample:

Bailer: Disposable Pump: 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 2 Soil: 8 Other: 0

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 3046.01 Ferndale Motors		Well Number: MW-5
Project Location: 638 Main Street Ferndale, California	Casing Diameter: 2"	Well Depth from TOC (BP): 14.90 Well Depth from TOC (AP):
Date: March 30, 2006	Top of Screen:	Initial Well Depth:
Sampled by (print and sign): Brian Hasik <i>Brian</i>	Product Thickness in inches: 0	
	Water Level from TOC: 5.73	Time: 9:02
	Water Level pre-purge: 5.73	Time: 9:23
	Well Type: <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	
Well EL (TOC):	Well Mat: PVC	

WEATHER

Wind: Yes / No	Clouds: Yes / No	Sun: Yes / No	Precipitation in last 5 days: Yes / No
Rain: Yes / No	Fog: Yes / No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

(TD - WL) X (Dia. 2) X 0.0408 = 1.47 gallons in one well volume
4.40 inches
1.47 gallons in 3 well volumes (Approx. 0.6 gal/ft) 5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
9:27	1	6.08	14.2	20		215.6	1
9:28	2	5.73	13.9	38		226.2	1
9:28	3	5.68	14.0	56		230.4	1
9:29	4	5.65	14.2	68		215.6	1
9:29	5	5.64	14.4	71		218.7	1

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 6.21 Time: 10:35

Appearance of Sample:

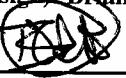
Bailer: Disposable Pump: 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 1 Soil: 0 Other: 0

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name: 3046.01 Ferndale Motors		Well Number: MW-6
Project Location: 638 Main Street Ferndale, California	Casing Diameter: 2"	Well Depth from TOC (BP): 14.70 Well Depth from TOC (AP):
Date: March 30, 2006	Top of Screen:	Initial Well Depth:
Sampled by (print and sign): Brian Hasik 	Product Thickness in inches: 0	
	Water Level from TOC: 5.46	Time: 9:03
Notes:	Water Level pre-purge: 5.46	Time: 9:30
	Well Type: <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	Well Mat: PVC

WEATHER

Wind: Yes <input checked="" type="checkbox"/> No	Clouds: Yes <input checked="" type="checkbox"/> No	Sun: Yes <input checked="" type="checkbox"/> No	Precipitation in last 5 days: Yes <input checked="" type="checkbox"/> No
Rain: Yes <input checked="" type="checkbox"/> No	Fog: Yes <input checked="" type="checkbox"/> No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

(TD - WL) X (Dia. Inches)² X 0.0408 = 1.51 gallons in one well volume
4.53 gallons in 3 well volumes (Approx. 0.6 gal/ft) 5 total gallons purged

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
9:33	1	5.74	13.1	76		235.2	L
9:34	2	5.62	12.8	102		236.1	L
9:35	3	5.63	13.0	105		240.7	I
9:36	4	5.60	13.3	108		237.6	I
9:36	5	5.61	13.5	109		232.1	L

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling: 5.83 Time: 10:40

Appearance of Sample:

Bailer: Disposable Pump: 12V Submersible (1-2 gpm)

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED: Water: 0 Soil: 0 Other: 0

GROUNDWATER FIELD SAMPLING FORM

WELL INFORMATION

Project Number/Name:	3046.01 Ferndale Motors		Well Number:	PZ-1
Project Location:	638 Main Street Ferndale, California	Casing Diameter:	2"	Well Depth from TOC (BP): Well Depth from TOC (AP): 15.10
Date:	March 30, 2006	Top of Screen:	Initial Well Depth:	
Sampled by (print and sign):	Brian Hasik <i>(Signature)</i>	Product Thickness in inches:		
Notes:		Water Level from TOC:	8.15	Time: 8:58
		Water Level pre-purge:	8.15	Time: 9:10
		Well Type:	<input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Extraction <input type="checkbox"/> Other:	
		Well EL (TOC):	Well Mat: PVC	

WEATHER

Wind: Yes / No	Clouds: Yes / No	Sun: Yes / No	Precipitation in last 5 days: Yes / No
Rain: Yes / No	Fog: Yes / No		

VOLUME OF WATER TO BE REMOVED BEFORE SAMPLING

TD	WL	X	2	X	0.0408	=	1.11	gallons in one well volume
<i>3.34</i>								
						gallons in 3 well volumes (Approx. 0.6 gal/ft) <i>5</i> total gallons purged		

FIELD MEASUREMENTS DURING PURGING

Stable Field Parameters Required Prior to Sample Collection <10% pH and EC change, <0.2°C temp. change

Time	Gallons	pH	TEMP °C	ORP	DO mg/L	EC mS / µS	Turbidity H/M/L
9:11	0.1	6.37	14.1	73		520.0	L
9:11	1.0	6.14	13.9	77		531.6	L
9:12	2	6.10	14.0	76		546.4	L
9:12	3	6.11	14.3	73		538.3	L
9:13	5	6.09	14.6	72		497.1	L

Minimum of 5 gallons or 0.6 gal/ft. Of water in casing - whichever is greater and field parameters must be stable.

Water Level Before Sampling <i>8.35</i>	Time: 10:20
---	-------------

Appearance of Sample:

Bailer: Disposable	Pump: 12V Submersible (1-2 gpm)
--------------------	---------------------------------

DECON. METHOD: TSP or Liquinox (phosphate free) Wash / Double Rinse

NUMBER OF DRUMS GENERATED:	Water: <i>2</i>	Soil: <i>8</i>	Other: <i>8</i>
----------------------------	-----------------	----------------	-----------------

DISPOSAL

APPENDIX B

Appendix B - Historical Groundwater Flow Direction and Gradient Data

Date	Monitoring Well	Top-of-Casing Elevations	Measured Water Level Depths	Calculated Water Level Elevations	Ground-Water Flow Direction/Gradient (i)
07/8/98	MW-1	47.69	7.45	40.24	North i = 0.020
	MW-2	49.16	8.46	40.70	
	MW-3	47.90	8.60	39.30	
12/30/99	MW-1	47.69	7.53	40.16	N 22°E i = 0.022
	MW-2	49.16	8.21	40.95	
	MW-3	47.90	8.57	39.33	
03/28/00	MW-1	47.69	7.10	40.59	N 2°W i = 0.027
	MW-2	49.16	8.00	41.16	
	MW-3	47.90	8.60	39.30	
09/07/00	MW-1	47.69	8.20	39.49	S 77°E i = 0.010
	MW-2	49.16	9.35	39.81	
	MW-3	47.90	8.16	39.74	
11/15/00	MW-1	47.69	7.26	40.43	N37°E i = 0.026
	MW-2	49.16	7.66	41.50	
	MW-3	47.90	8.21	39.69	
03/28/01	MW-1	47.69	7.00	40.69	North i = 0.03
	MW-2	49.16	7.80	41.36	
	MW-3	47.90	8.57	39.33	
07/26/01	MW-1	47.69	8.10	39.59	N23°E i = 0.02
	MW-2	49.16	9.04	40.12	
	MW-3	47.90	8.82	39.08	
10/16/01	MW-1	47.69	8.38	39.31	N20°E i = 0.01
	MW-2	49.16	9.46	39.70	
	MW-3	47.90	8.87	39.03	



Appendix B Continued

Date	Monitoring Well	Top-of-Casing Elevations	Measured Water Level Depths	Calculated Water Level Elevations	Ground-Water Flow Direction/Gradient (i)
01/14/02	MW-1	47.69	6.87	40.82	N 20°E i = 0.03
	MW-2	49.16	7.16	42.00	
	MW-3	47.90	8.39	39.51	
04/22/02	MW-1	47.69	7.11	40.58	North i = 0.03
	MW-2	49.16	7.93	41.23	
	MW-3	47.90	8.59	39.31	
07/23/02	MW-1	47.69	8.10	39.59	N 20°E i = 0.01
	MW-2	49.16	9.12	40.04	
	MW-3	47.90	8.82	39.08	
12/04/02	MW-1	47.69	8.12	39.57	Easterly i = 0.03
	MW-2	49.16	8.95	40.21	
	MW-3	47.90	8.86	39.04	
	MW-4	46.79	7.92	38.87	
	MW-5	48.14	8.56	39.58	
	MW-6	48.97	9.04	39.93	



Appendix B - Continued

Sample Date	Monitoring Well ID	Top-of-Casing Elevations (feet - msl)	Measured Water Level Depths (feet)	Calculated Water Level Elevations (feet - msl)	Groundwater Flow Direction/Gradient (i)
03/26/03	MW-1	47.69	6.44	41.25	Easterly i = 0.10
	MW-2	49.16	6.25	42.91	
	MW-3	47.90	8.19	39.71	
	MW-4	46.79	6.78	40.01	
	MW-5	48.14	4.54	43.60	
	MW-6	48.97	3.81	45.16	
09/10/03	MW-1	47.69	8.43	39.26	Easterly i = 0.02
	MW-2	49.16	9.26	39.90	
	MW-3	47.90	8.83	39.07	
	MW-4	46.79	7.99	38.80	
	MW-5	48.14	8.37	39.77	
	MW-6	48.97	8.91	40.06	
3/03/04	MW-1	47.69	6.60	41.09	Variable i = varies
	MW-2	49.16	6.74	42.42	
	MW-3	47.90	8.18	39.72	
	MW-4	46.79	7.50	39.29	
	MW-5	48.14	5.45	42.69	
	MW-6	48.97	5.68	43.29	



Appendix B - Continued

Sample Date	Monitoring Well ID	Top-of-Casing Elevations (feet - msl)	Water Level Depth (feet)	Calculated Water Level Elevation (feet - msl)	Groundwater Flow Direction/Gradient (i)
7/02/04	MW-1	47.69	8.05	39.64	Variable i = varies
	MW-2	49.16	9.05	40.11	
	MW-3	47.90	8.80	39.11	
	MW-4	46.79	8.01	38.78	
	MW-5	48.14	8.11	40.03	
	MW-6	48.97	8.54	40.43	
03/15/05	MW-1	47.69	7.36	40.33	Variable i = varies
	MW-2	49.16	8.10	41.06	
	MW-3	47.90	8.64	39.26	
	MW-4	46.79	7.84	38.95	
	MW-5	48.14	6.75	41.39	
	MW-6	48.97	6.36	42.61	
	PZ-1	48.86	8.82	40.04	
09/23/05	MW-1	47.69	8.31	39.38	Variable i = varies
	MW-2	49.16	9.33	39.83	
	MW-3	47.90	8.86	39.04	
	MW-4	46.79	8.03	38.76	
	MW-5	48.14	8.10	40.04	
	MW-6	48.97	8.32	40.65	
	PZ-1	48.86	9.36	39.50	



Appendix B - Continued

Sample Date	Monitoring Well ID	Top-of-Casing Elevations (feet - msl)	Water Level Depth (feet)	Calculated Water Level Elevation (feet - msl)	Groundwater Flow Direction/Gradient (i)
03/30/06	MW-1	47.69	6.54	41.15	Northerly / Southerly $i = 0.03 / 0.07$
	MW-2	49.16	6.80	42.36	
	MW-3	47.90	8.13	39.77	
	MW-4	46.79	7.57	39.22	
	MW-5	48.14	5.73	42.41	
	MW-6	48.97	5.46	43.51	
	PZ-1	48.86	8.15	40.31	



APPENDIX C



Report Number : 49297

Date : 4/10/2006

Kim Sidener
Trans Tech Consultants
930 Shiloh Rd., Building 44, Suite J
Windsor, CA 95492

Subject : 7 Water Samples
Project Name : Ferndale Motors
Project Number : 3046.01

Dear Mr. Sidener,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 49297

Date : 4/10/2006

Subject : 7 Water Samples
Project Name : Ferndale Motors
Project Number : 3046.01

Case Narrative

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for samples MW-1 and MW-3.

Approved By:

Joe Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : MW-1

Matrix : Water

Lab Number : 49297-01

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	27	0.50	ug/L	EPA 8260B	4/4/2006
Toluene	7.2	0.50	ug/L	EPA 8260B	4/4/2006
Ethylbenzene	18	0.50	ug/L	EPA 8260B	4/4/2006
Total Xylenes	7.8	0.50	ug/L	EPA 8260B	4/4/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/4/2006
TPH as Gasoline	4400	50	ug/L	EPA 8260B	4/4/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006
Toluene - d8 (Surr)	89.7		% Recovery	EPA 8260B	4/4/2006
4-Bromofluorobenzene (Surr)	96.6		% Recovery	EPA 8260B	4/4/2006
Dibromofluoromethane (Surr)	90.9		% Recovery	EPA 8260B	4/4/2006
1,2-Dichloroethane-d4 (Surr)	85.5		% Recovery	EPA 8260B	4/4/2006
TPH as Diesel	< 1500	1500	ug/L	M EPA 8015	4/5/2006
Octacosane (Diesel Surrogate)	90.2		% Recovery	M EPA 8015	4/5/2006

Approved By:

Joel Kiff



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : MW-2

Matrix : Water

Lab Number : 49297-02

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Methyl-t-butyl ether (MTBE)	0.60	0.50	ug/L	EPA 8260B	4/5/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/5/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/5/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	4/5/2006
4-Bromofluorobenzene (Surr)	96.6		% Recovery	EPA 8260B	4/5/2006
Dibromofluoromethane (Surr)	107		% Recovery	EPA 8260B	4/5/2006
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	4/5/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	4/5/2006
Octacosane (Diesel Surrogate)	91.4		% Recovery	M EPA 8015	4/5/2006

Approved By: 
Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : MW-3

Matrix : Water

Lab Number : 49297-03

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	280	0.50	ug/L	EPA 8260B	4/7/2006
Toluene	3.0	0.50	ug/L	EPA 8260B	4/7/2006
Ethylbenzene	10	0.50	ug/L	EPA 8260B	4/7/2006
Total Xylenes	4.8	0.50	ug/L	EPA 8260B	4/7/2006
Methyl-t-butyl ether (MTBE)	0.85	0.50	ug/L	EPA 8260B	4/7/2006
Diisopropyl ether (DIPE)	1.5	0.50	ug/L	EPA 8260B	4/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-Butanol	10	5.0	ug/L	EPA 8260B	4/7/2006
TPH as Gasoline	2200	50	ug/L	EPA 8260B	4/7/2006
1,2-Dichloroethane	6.9	0.50	ug/L	EPA 8260B	4/7/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene - d8 (Surr)	94.4		% Recovery	EPA 8260B	4/7/2006
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	4/7/2006
Dibromofluoromethane (Surr)	112		% Recovery	EPA 8260B	4/7/2006
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	4/7/2006
TPH as Diesel	< 1000	1000	ug/L	M EPA 8015	4/5/2006
Octacosane (Diesel Surrogate)	84.8		% Recovery	M EPA 8015	4/5/2006

Approved By:

Joel Kiff



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : MW-4

Matrix : Water

Lab Number : 49297-04

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/7/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/7/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene - d8 (Surr)	95.8		% Recovery	EPA 8260B	4/7/2006
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	4/7/2006
Dibromofluoromethane (Surr)	114		% Recovery	EPA 8260B	4/7/2006
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	4/7/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	4/6/2006
Octacosane (Diesel Surrogate)	89.4		% Recovery	M EPA 8015	4/6/2006

Approved By:

Joel Kiff



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : MW-5

Matrix : Water

Lab Number : 49297-05

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/7/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/7/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene - d8 (Surr)	95.8		% Recovery	EPA 8260B	4/7/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	4/7/2006
Dibromofluoromethane (Surr)	116		% Recovery	EPA 8260B	4/7/2006
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	4/7/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	4/6/2006
Octacosane (Diesel Surrogate)	91.0		% Recovery	M EPA 8015	4/6/2006

Approved By:

Joel Kiff



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : MW-6

Matrix : Water

Lab Number : 49297-06

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/7/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/7/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene - d8 (Surr)	96.5		% Recovery	EPA 8260B	4/7/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/7/2006
Dibromofluoromethane (Surr)	115		% Recovery	EPA 8260B	4/7/2006
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	4/7/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	4/6/2006
Octacosane (Diesel Surrogate)	91.6		% Recovery	M EPA 8015	4/6/2006

Approved By:

Joel Kiff



Report Number : 49297

Date : 4/10/2006

Project Name : Ferndale Motors

Project Number : 3046.01

Sample : PZ-1

Matrix : Water

Lab Number : 49297-07

Sample Date : 3/30/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/7/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/7/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene - d8 (Surr)	95.7		% Recovery	EPA 8260B	4/7/2006
4-Bromofluorobenzene (Surr)	99.6		% Recovery	EPA 8260B	4/7/2006
Dibromofluoromethane (Surr)	116		% Recovery	EPA 8260B	4/7/2006
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	4/7/2006
TPH as Diesel	< 50	50	ug/L	M EPA 8015	4/6/2006
Octacosane (Diesel Surrogate)	89.0		% Recovery	M EPA 8015	4/6/2006

Approved By:

Joel Kiff

QC Report : Method Blank Data
Project Name : Ferndale Motors
Project Number : 3046.01

Report Number : 49297
Date : 4/10/2006

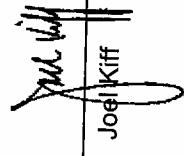
Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	4/5/2006	4-Bromofluorobenzene (Surr)	98.6	%	EPA 8260B	4/5/2006	
Octacosane (Diesel Surrogate)	91.0		%	M EPA 8015	4/5/2006	Dibromofluoromethane (Surr)	109	%	EPA 8260B	4/5/2006	
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	1,2-Dichloroethane-d4 (Surr)	94.6	%	EPA 8260B	4/5/2006	
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/4/2006	Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/4/2006	Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/7/2006
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/7/2006
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/4/2006	1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
Toluene - d8 (Sur)	107		%	EPA 8260B	4/4/2006	1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/7/2006
4-Bromofluorobenzene (Surr)	94.8		%	EPA 8260B	4/4/2006	Toluene - d8 (Sur)	96.8		%	EPA 8260B	4/7/2006
Dibromofluoromethane (Surr)	108		%	EPA 8260B	4/4/2006	4-Bromofluorobenzene (Surr)	101		%	EPA 8260B	4/7/2006
1,2-Dichloroethane-d4 (Sur)	108		%	EPA 8260B	4/4/2006	Dibromofluoromethane (Surr)	113		%	EPA 8260B	4/7/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006	1,2-Dichloroethane-d4 (Sur)	103		%	EPA 8260B	4/7/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/5/2006						
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/5/2006						
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/5/2006						
Toluene - d8 (Sur)	108		%	EPA 8260B	4/5/2006						

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By:

Joe Kiff

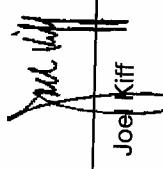


Project Name : Ferndale Motors
Project Number : 3046.01

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.		
										Relative Percent Diff.		
TPH as Diesel	Blank	<50	1000	1000	953	958	ug/L	M EPA 8015	4/5/06	95.3	95.8	0.513
Benzene	49297-01	27	40.0	40.0	60.8	59.8	ug/L	EPA 8260B	4/4/06	85.5	83.0	3.06
Toluene	49297-01	7.2	40.0	40.0	43.0	42.2	ug/L	EPA 8260B	4/4/06	89.3	87.5	2.05
Tert-Butanol	49297-01	<5.0	200	200	193	192	ug/L	EPA 8260B	4/4/06	96.6	96.2	0.413
Methyl-t-Butyl Ether	49297-01	<0.50	40.0	40.0	31.5	32.3	ug/L	EPA 8260B	4/4/06	78.8	80.7	2.28
Benzene	49297-02	<0.50	40.0	40.0	39.0	38.0	ug/L	EPA 8260B	4/5/06	97.4	95.0	2.48
Toluene	49297-02	<0.50	40.0	40.0	41.6	40.8	ug/L	EPA 8260B	4/5/06	104	102	1.77
Tert-Butanol	49297-02	<5.0	200	200	202	201	ug/L	EPA 8260B	4/5/06	101	101	0.283
Methyl-t-Butyl Ether	49297-02	0.60	40.0	40.0	41.2	41.0	ug/L	EPA 8260B	4/5/06	101	101	0.252
Benzene	49350-04	0.66	40.0	40.0	42.8	41.9	ug/L	EPA 8260B	4/7/06	105	103	2.13
Toluene	49350-04	<0.50	40.0	40.0	41.2	40.3	ug/L	EPA 8260B	4/7/06	103	101	2.34
Tert-Butanol	49350-04	33	200	200	232	225	ug/L	EPA 8260B	4/7/06	99.6	96.3	3.41
Methyl-t-Butyl Ether	49350-04	9.7	40.0	40.0	50.2	49.8	ug/L	EPA 8260B	4/7/06	101	100	0.832

KIFF ANALYTICAL, LLC
2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By: Joe Kiff



Project Name : Ferndale Motors

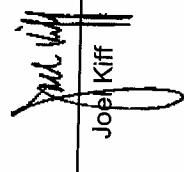
Project Number : 3046.01

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov.
Benzene	40.0	ug/L	EPA 8260B	4/4/06	92.2	70-130
Toluene	40.0	ug/L	EPA 8260B	4/4/06	102	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/4/06	96.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/4/06	96.6	70-130
Benzene	40.0	ug/L	EPA 8260B	4/5/06	87.7	70-130
Toluene	40.0	ug/L	EPA 8260B	4/5/06	95.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/5/06	93.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/5/06	90.9	70-130
Benzene	40.0	ug/L	EPA 8260B	4/7/06	105	70-130
Toluene	40.0	ug/L	EPA 8260B	4/7/06	104	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/7/06	98.0	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/7/06	98.0	70-130

KIFF ANALYTICAL, LLC

Approved By:

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



Joe Kiff

Analytical LLC

Project Contact (Handcopy or PDF To):

Brian Hasik

Company Address:

930 Shiloh Rd., Building 44, Suite J, Windsor, CA 95492

Phone #:

(707) 575-8622

Fax #:

530.297.4800

Lab: 530.297.4802

Fax: 530.297.4802

California EDF Report?

Sampling Company Log Code:

Global ID: **A06023300262**EDF Deliverable To (Email Address): **ecjones@analyticalllc.com**P.O. #: **3046-01**Sampler Signature: **[Signature]**Project Name: **Ferrante Motors**Project Address: **628 Main St.****Ferndale**Sampling Date: **3/30**Time: **1100**Container: **40 ml VOA**Preservative: **X**Matrix: **Water**Soil: **X**Air: **X**None: **X**HNO₃: **X**HCl: **X**Teflon: **X**Glass: **X**Poly: **X**Grove: **X**None: **X**HCl: **X**Teflon: **X**

Glass: <b

APPENDIX D

Appendix D - Historical Groundwater Analytical Results

Monitoring Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE
		µg/L						
MW-1	7/08/98	2,600	ND	36	3.1	ND	3.0	ND**
	12/30/99	5,000	1,800*	83	33	33	31	ND
	3/28/00	2,400	480*	28	5.9	18	7.9	ND
	9/07/00	1,500	600*	41	3.5	17	13	<25
	11/15/00	1,100	1,100	35	6.0	22	13	<50
	3/28/01	NS	NS	NS	NS	NS	NS	NS
	7/26/01	920	<50	24	4.7	9.1	14	<10
	10/16/01	850	68*	3.8	<1.0	2.6	1.6	<1.0
	1/14/02	4,600	540*	50	9.1	13	<5.0	<5.0
	4/22/02	1,800	290*	29	4.9	7.4	6.6	<0.5
	7/23/02	880	130*	23	2.4	6.2	1.4	<0.50
	12/04/02	1,100	170	16	1.1	4.0	1.2	<0.50**
	3/26/03	3,900	520*	53	7.0	14	<5.0	<5.0
	9/10/03	2,100	140	30	<30	<50	<50	<50
	3/04/04	5,200	660*	73	<6.0	32	<10	<10
	7/02/04	3,600	390*	56	<15	<25	<25	<25
	3/15/05	4,100	780*	43	11	15	7.1	<2.5
	9/23/05	3,400	NA	34	2.9	7.3	5.2	<0.50
	3/30/06	4,400	<1500 ⁺	27	7.2	18	7.8	<0.50

ND = not detected at or above the laboratory test method detection limits.

NS = not sampled.

NA = not analyzed.

< = less than the reported laboratory detection limits.

* = higher boiling point components of gasoline are present.

+ = The method reporting limit for TPH as diesel is increased due to interference from gasoline-range hydrocarbons.

** = additional 8260 analytes detected (see laboratory reports).



Appendix D - continued

Monitoring Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE
		µg/L						
MW-2	7/08/98	ND	ND	ND	ND	ND	ND	ND
	12/30/99	ND	ND	ND	ND	ND	ND	ND
	3/28/00	ND	ND	ND	ND	ND	ND	ND
	9/07/00	ND	ND	ND	ND	ND	ND	ND
	11/15/00	ND	ND	ND	ND	ND	ND	ND
	3/28/01	NS	NS	NS	NS	NS	NS	NS
	7/26/01	<50	<50	1.1	<1.0	0.60	<1.0	2.7
	10/16/01	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0
	1/14/02	<50	<50	<0.3	<0.3	<0.5	<0.5	2.7
	4/22/02	<50	<50	0.38	1.9	0.82	2.8	2.6
	7/23/02	<50	<50	0.41	<0.30	<0.50	<0.50	2.0
	12/04/02	<50	<50	<0.30	<0.30	<0.50	<0.50	1.6
	3/26/03	<50	<50	<0.30	<0.30	<0.50	<0.50	1.3
	9/10/03	<50	190*	<0.30	<0.30	<0.50	<0.50	1.0
	3/03/04	<50	<50	<0.30	<0.30	<0.50	<0.50	1.9
	7/02/04	<50	<50	<0.30	<0.30	<0.50	<0.50	0.95
	3/15/05	<50	<50	<0.30	<0.30	<0.50	<0.50	0.71
	9/23/05	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	3/30/06	<50	<50	<0.50	<0.50	<0.50	<0.50	0.60

ND = not detected at or above the laboratory test method detection limits.

NS = not sampled.

NA = not analyzed.

< = less than the reported laboratory detection limits.

* = The sample was apparently mis-labeled and results appear to be consistent with historical results from MW-3.



Appendix D continued

Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE	Additional 8260B
		ug/L							
MW-3	7/08/98	250	ND	25	1.9	ND	ND	5.2	20.0 DIPE
	12/30/99	2,800	1,200*	400	16	28	19	ND	ND
	3/28/00	5,700	600*	750	13	37	ND	ND	ND
	9/07/00	1,200	650*	240	4.0	22	13	2.5	4.5 DIPE 49 TBA
	11/15/00	1,500	220	230	ND	5.8	ND	<50	ND
	3/28/01	NS	NS	NS	NS	NS	NS	NS	NS
	7/26/01	1,600	ND	210	12	20	20	<25	ND
	10/16/01	570	120*	67	<1.0	3.1	<1.0	<1.0	8.8 EDC
	1/14/02	1,000	290*	250	4.0	18	<5.0	<5.0	ND
	4/22/02	2,400	240*	300	1.6	3.6	4.3	1.2	ND
	7/23/02	2,400	240*	430	3.3	13	3.5	<0.50	ND
	12/04/02	950	81**	69	0.94	2.5	1.2	<0.50	2.9 DIPE 17 TBA 11 EDC
	3/26/03	2,600	200*	290	<3.0	9.3	<5.0	<5.0	ND
	9/10/03	1,600	<50	170	<30	<50	<50	<50	ND
	3/04/04	3,000	560*	460	<30	<50	<50	<50	ND
	7/02/04	3,700	340*	440	<15	<25	<25	<25	ND
	3/15/05	2,200	460*	270	<6.0	<10	<10	<10	ND
	9/23/05	1,700	NA	160	1.8	3.6	2.7	0.62	1.4 DIPE 8.7 TBA 7.4 EDC
	3/30/05	2,200	<1,000 ⁺	280	3.0	10	4.8	0.85	1.5 DIPE 10 TBA 6.9 EDC

ND = not detected at or above the laboratory test method detection limits.

NS = not sampled. NA = not analyzed.

< = less than the reported laboratory detection limits.

* = higher boiling point components of gasoline are present.

+ = the method reporting limit for TPH as diesel is increased due to interference from gasoline-range hydrocarbons.

** = the sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Appendix D continued

Monitoring Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE
		----- <u>µg/L</u> -----						
MW-4	12/04/02	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/26/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/10/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/03/04	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	7/02/04	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/15/05	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/23/05	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	3/30/06	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50

ND = not detected at or above the laboratory test method detection limits.
 NS = not sampled.
 NA = not analyzed.
 < = less than the reported laboratory detection limits.



Appendix D continued

Monitoring Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE
		-----ug/L-----						
MW-5	12/04/02	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/26/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/10/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/03/04	<50	230	<0.30	<0.30	<0.50	<0.50	<0.50
	7/02/04	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/15/05	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/23/05	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	3/30/06	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50

ND = not detected at or above the laboratory test method detection limits.
 NS = not sampled.
 NA = not analyzed.
 < = less than the reported laboratory detection limits.



Appendix D continued

Monitoring Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE
		----- <u>µg/L</u> -----						
MW-6	12/04/02	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/26/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/10/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/03/04	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	7/02/04	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/15/05	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/23/05	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	3/30/06	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
ND = not detected at or above the laboratory test method detection limits. NS = not sampled. NA = not analyzed. < = less than the reported laboratory detection limits.								



Appendix D continued

Monitoring Well ID	Sample Date	TPH-g	TPH-d	B	T	E	X	MtBE
		-----ug/L-----						
PZ-1	12/30/99	ND	ND	ND	ND	ND	ND	ND
	3/28/00	ND	ND	ND	ND	ND	ND	ND
	9/07/00	ND	ND	ND	ND	ND	ND	ND
	11/15/00	ND	ND	ND	ND	ND	ND	ND
	3/28/01	NS	NS	NS	NS	NS	NS	NS
	7/26/01	<50	<50	4.8	<1.0	1.0	1.9	<1.0
	10/16/01	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0
	1/14/02	NS	NS	NS	NS	NS	NS	NS
	4/22/02	<50	<50	0.47	1.6	0.73	2.4	<0.5
	7/23/02	<50	<50	0.75	<0.30	<0.50	<0.50	<0.50
	12/04/02	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/26/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/10/03	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/04/04	<50	110	<0.30	<0.30	<0.50	<0.50	<0.50
	7/02/04	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	3/15/05	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50
	9/23/05	<50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	3/30/06	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50

ND = not detected at or above the laboratory test method detection limits.
 NS = not sampled.
 NA = not analyzed.
 < = less than the reported laboratory detection limits.



Appendix D continued - Supplemental Geochemical Parameters

Sample Date	Monitoring Well ID	Total Alkalinity	Free CO ₂ *	NO ₃ ⁻¹	SO ₄ ⁻²	Mn	Fe ⁺²	ORP
		mg CaCO ₃ /L	mg CO ₂ /L	mg/L				mVolts
10/16/01	MW-1	410	210	<0.5	3.1	3.2	19	140
	MW-2	110	170	11	29	0.031	<0.5	270
	MW-3	530	270	<0.5	2.7	4.3	18	170
	PZ-1	270	54	2.1	63	0.090	<0.5	260

Note = See attached laboratory report for pH readings, and Free CO₂ as calculated by the laboratory.

Sample Date	Well ID	Total Alkalinity as CaCO ₃	Dissolved Oxygen (DO)	Nitrate (NO ₃)	Sulfate (SO ₄)
			mg/L	mg/L	mg/L
7/02/04	MW-1	380	0.46	<1.0	<0.50
	MW-2	NA	0.73	NA	NA
	MW-3	490	0.62	<1.0	1.5
	MW-4	NA	1.93	NA	NA
	MW-5	70	0.59	<1.0	12
	MW-6	71	3.45	<1.0	13
	PZ-1	200	0.45	1.2	46

< = Less than the indicated laboratory test method detection limit.
NA = Not analyzed.



APPENDIX E

TIME vs. CONCENTRATION GRAPH
FERNDALE MOTORS
638 MAIN ST FERNDALE
TTC Job No. 3046.01
WELL MW-1



ND=LESS THAN REPORTED DETECTION

NOTE: RESULTS IN THE DIESEL ORGANICS RANGE ARE PRIMARILY
DUE TO OVERLAP FROM A GASOLINE RANGE PRODUCT (SEE LABORATORY REPORTS).

◆ TPH AS GASOLINE UG/L
× WATER

■ TPH AS DIESEL
— Expon. (BENZENE)

▲ BENZENE
— Expon. (TPH AS GASOLINE UG/L)

TIME vs. CONCENTRATION GRAPH
FERNDALE MOTORS
638 MAIN ST FERNDALE
TTC Job No. 3046.01
WELL MW-3



ND=LESS THAN REPORTED DETECTION
 NOTE: RESULTS IN THE DIESEL ORGANICS RANGE ARE PRIMARILY DUE TO OVERLAP FROM A GASOLINE RANGE PRODUCT (SEE LABORATORY REPORTS).

—♦— TPH AS GASOLINE UG/L —■— TPH AS DIESEL UG/L ▲ BENZENE
 —×— WATER —— Expon. (TPH AS GASOLINE UG/L) —— Expon. (BENZENE)

DISTRIBUTION LIST

1st Quarter 2006 Monitoring Report

**Ferndale Motors
638 Main Street
Ferndale, California**

**April 18, 2006
Job No. 3046.01**

Mr. Mark Verhey
Humboldt County Department of Health and Human Services
Division of Environmental Health
100 H Street, Suite 100
Eureka, California 95501

North Coast Regional Water
Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

